

**ENVIRONMENTAL SERVICES
DEPARTMENT**

Albert F. Brown, Director
1001 N. Central Avenue #150
Phoenix, AZ 85004

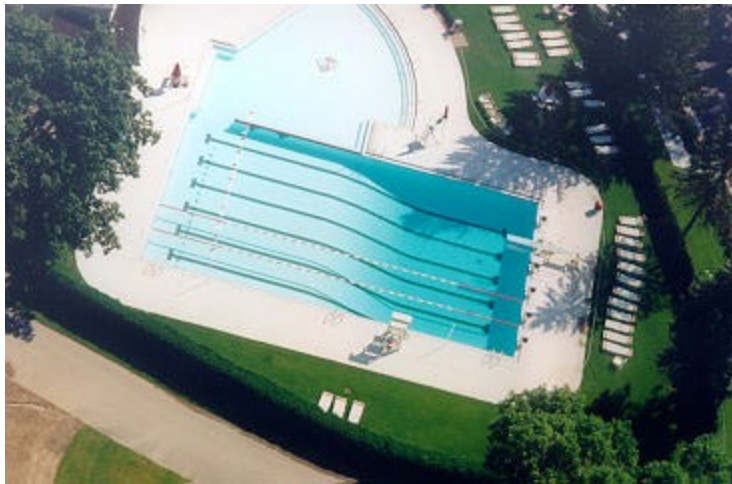


**WATER AND WASTE MANAGEMENT
DIVISION**

John A. Power, P.E., Manager
Telephone (602) 506-6666
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(For hearing/speech impaired)

Application Packet for Approval to Construct a Public or Semi-Public Swimming Pool

Revised: January 17, 2001



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CONTACT INFORMATION:

JOE JASON, PE, RS, MANAGER

COMMERCIAL SWIMMING POOL CONSTRUCTION PROGRAM

TELEPHONE (602) 506-6921; FAX (602) 506-6925

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FEES FOR PLANS EXAMINATION, INSPECTIONS AND PERMITS

Initial Fees are necessary to begin Plans Examination and Inspections. The initial fees for Swimming Pool and Spa Plan Reviews and Inspections are:

Size (ft²)	Initial Fee	Max Fee	Expedited* Initial Fee	Expedited* Max Fee
<1000	\$200	\$840	\$400	\$1680
1001 –2000	\$680	\$2040	\$1360	\$4080
2001 – 9999	\$795	\$2385	\$1590	\$4770
>10,000	\$1050	\$3165	\$2100	\$6330
Variance	\$200 per Variance			

* - Plans submitted for Expedited Review requires prior approval.

If the actual cost exceeds the initial fee, the Department will bill the Applicant for the difference between the actual cost and the initial fee. Actual costs are based on \$70/hr. Such a difference shall be paid in full prior to issuance of a Permit.

In addition to the above fees, an annual permit fee of \$150 per Spa or Wading Pool and \$200 per Swimming Pool is charged. This fee covers regular annual inspection(s).

REGULATORY AUTHORITY

The Maricopa County Environmental Services Department (MCESD) regulates Public and Semipublic Pools and Spas under Delegation Agreements with the Arizona Department of Environmental Quality (ADEQ) and the Arizona Department of Health Services (ADHS) as authorized by the ARIZONA REVISED STATUTES (ARS) 49-107: Local delegation of state authority. The Delegation Agreements between the county (MCESD) and the state simply authorizes the county to regulate Public and Semipublic Pools and Spas using the State's regulations in addition to the county's own regulations (the Maricopa County Environmental Health Code (MCEHC)). However, any changes or comments concerning the state regulations should be addressed to the state (ADEQ, ADHS) as only those departments can effect changes to the state regulations which they promulgate and administer. The two State Arizona Administrative Codes (AAC) administered by MCESD are: R18-5-200 (ADEQ) and R9-8-800 (ADHS).

In addition to regulating Public and Semipublic Pools and Spas by administering State of Arizona rules and regulations, MCESD also regulates Public and Semipublic Pools and Spas by administering the **MARICOPA COUNTY ENVIRONMENTAL HEALTH CODE (MCEHC): Chapter VI; Bathing Places – Public and Semi-Public Swimming Pools** as authorized by ARS 49-112: County regulation; standards. This means that MCESD has established within the MCEHC additional rules and regulations for Public and Semipublic Pools and Spas. The main advantage of Maricopa County having its own rules is that it allows the county the flexibility to modify the rules to meet the ever-changing needs of the swimming pool industry. Maricopa County has updated its rules numerous times to meet the changing needs of the swimming pool industry.

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**APPLICATION FOR APPROVAL TO CONSTRUCT A PUBLIC OR SEMI-PUBLIC
SWIMMING POOL OR SPA**

A: Check One ☐ Semi-Public ☐ Public ☐ Variance

B: (Check all that apply) ☐ Non-Diving ☐ Main ☐ Wader
☐ Diving ☐ Therapy ☐ Special Use

FACILITY, OWNER AND CONTRACTOR/ENGINEER/ARCHITECT INFORMATION

1. To Serve (Facility Name and type): _____
2. Facility Contact Name: _____ Phone #: () _____
3. Street Address: _____ City: _____ Zip: _____
4. OWNERSHIP Name: _____ Phone #: () _____
5. Authorized Agent's Name: _____ Title: _____
6. Address: _____ FAX #: () _____
7. City: _____ State: _____ Zip: _____
8. GENERAL Contractor's Name: _____ Phone #: () _____
9. POOL Contractor/Engineer/Architect's Name: _____
10. AZ Registration/License # (Cont: A-9,19, KA-5,6): _____ Phone #: () _____
11. Address: _____ FAX #: () _____
12. City: _____ State: _____ Zip: _____

DESIGN DATA

13. Perimeter (ft): _____ Area (ft²): _____ Average Width (ft): _____ Total Length (ft): _____
14. Volume (gal): _____ Turnover Time Required (hours): _____ Turnover Rate Required (gpm): _____
15. Structure: Gunit ☐ Poured Concrete ☐ Fiberglass ☐ Plastic ☐ Other ☐
16. Fully Describe Finish (Plaster, PebbleTec, Color, etc.): _____
17. Skimmers (qty): _____ Make/Model: _____ Flow Required (# skimmers X 27 gpm): _____
18. Returns/Inlets (qty): _____ Wall: _____ Floor: _____
19. Surge Tank Capacity (For Gutter or Rim Flow Systems Only): _____ gallons
20. Filter Type: Sand ☐ D.E. ☐ Cartridge ☐
(20 gpm/ ft² max flow) (2 gpm/ ft² max flow) (0.375gpm/ ft² max flow)
21. Filter Manufacturer: _____ Entire Model #: _____

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DESIGN DATA (CONTINUED)

22. Filter Flow Capacity: 1) _____ X _____ X _____ = _____
(Lowest of #1 # of Filters size (ft²) max flow allowed (gpm/ ft²)(see #20) max flow rate (gpm)
or #2 Governs) 2) _____ From Manufacturer's Specifications (NSF Listed Rating)
(max gpm)
23. Chlorinator Make & Entire Model #: _____ Erosion ☐ Liquid ☐ Gas ☐
24. Pump Make & Entire Model #: _____ Horsepower: _____
25. Distance From Main Drain: _____ (ft) TDH: _____ (ft) Flow: _____ (gpm) Turnover: _____ (hr)
26. Waste Discharged to: Sewer ☐ (Requires 2X Pipe Diameter Air Gap) Irrigation ☐ Wet Well ☐
27. Cleaning Equipment: Manual ☐ Automatic ☐ Make/Model: _____
28. Vacuum System: Portable ☐ Internal ☐
29. Auto Fill Line: Surface ☐ Submerged ☐ Backflow Protection Method: _____
30. Do all Doors/Gates swing AWAY from the pool/spa area? NO ☐ YES ☐
31. Are there any windows in the pool enclosure or planters/water features within 4' of pool/spa? NO ☐ YES ☐
32. If answer is YES to the above question, are detailed plans for each attached? NO ☐ YES ☐
33. Walkways - Minimum Width: _____ (ft) Finish Type: _____
34. Safety Equipment: Ring Buoy with 50 ft Line ☐ Shepherd's Crook with 16ft Pole ☐
35. Depth Markers: _____ ft _____ ft _____ ft _____ ft _____ ft _____ ft _____ ft _____ ft _____ ft _____ ft

SIGNATURES

By signing below, the Engineer, Architect or Contractor certifies that they are familiar with all State and County Code requirements applicable to this project and that this bathing place will be constructed and operated in accordance with the Maricopa County Environmental Health Code governing design, construction and operation of public and semi-public bathing places. By signing below as Owner, certification is made that the signor is an authorized agent for the true ownership, and that the ownership information above is correct.

36. Architect, Engineer or Contractor's Signature: _____
37. Printed Name: _____ Date: _____
38. Pool Owner's Signature: _____ Title: _____
39. Printed Name: _____ Date: _____

One legible copy each of the application, plans and additional specifications or calculations must be submitted. One **ORIGINAL** copy of manufacturers specifications on each piece of equipment is required. Signatures must be original on one application and **ALL PLANS MUST HAVE ARCHITECT/ENGINEER/CONTRACTOR OF RECORD'S ORIGINAL SIGNATURE AND DATE ON ONE SET.** Revised plans and applications must have the revision date, the word "REVISED" and an original signature for the Contractor/Architect/Engineer. Certification that the pool is constructed in accordance with approved plans and specifications must be submitted prior to final inspection and opening the pool for use. Permit will NOT be issued for operation of uncertified pools.

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**SEMI-PUBLIC BATHING PLACE BARRIER/ENCLOSURE
APPLICATION FOR APPROVAL TO CONSTRUCT**

To Serve (Facility Name and type): _____

Address: _____ **City:** _____ **Zip:** _____

OWNERSHIP Name: _____

Authorized Agent's Name: _____ **Phone #:** (____) _____

Address: _____ **FAX #:** (____) _____

City: _____ **State:** _____ **Zip:** _____

CONTRACTOR/ENGINEER/ARCHITECT'S Company Name: _____

Licensee's Name: _____ **Phone #:** (____) _____

Address: _____ **FAX #:** (____) _____

City: _____ **State:** _____ **Zip:** _____

By signing below, the **Engineer, Architect or Contractor** certifies that they are familiar with all State and County Code requirements applicable to this project and that this bathing place barrier/enclosure will be constructed and operated in accordance with the Maricopa County Environmental Health Code governing design, construction and operation of public and semi-public bathing places. By signing below as **Owner**, certification is made that the signor is an authorized agent for the true ownership, and that the ownership information above is correct.

Architect, Engineer or Contractor's Signature: _____

AZ Registration/License # and type: _____ **Date:** _____

Pool Owner's Signature: _____

Title: _____ **Date:** _____

Attach Signed Plans with Architect's/Engineer's Seal or Contractor's License Number

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MINIMUM BARRIER/ENCLOSURE REQUIREMENTS FOR SEMI-PUBLIC POOLS AND SPAS

Semi-Public swimming pools and/or spas shall be provided with a barrier which shall comply with the following:

1. The top of the barrier shall be maintained at least 60" inches above grade, measured on the side of the barrier which faces away from the swimming pool. A barrier wall or fence cannot be in common with any residence wall or fence.
2. Solid barriers which do not have openings, such as a masonry or stone walls and columns or fence columns, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints typical of CMU or stucco construction.
3. For fencing constructed over landscaping (turf, dg, native), there can be no more than 2" clearance between fence and **final grade** (grade cannot be mounded). If constructed over deck (concrete, asphalt, cool deck, etc.), there can be no more than 4" clearance between fence bottom and deck .
4. Openings in the barrier shall not allow passage of a 4-inch diameter sphere anywhere through it and be constructed to afford no external handholds or footholds.
5. Where the barrier is composed of horizontal and vertical members and the distance between the horizontal members is less than 45" inches, the horizontal members shall be located on the swimming pool side of the fence and the spacing between the vertical members shall not exceed 1 3/4 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches in width.
6. Where the barrier is composed of horizontal and vertical members and the distance between the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4-inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches in width.
7. Maximum mesh size for chain link fences shall be a 1 1/4 inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1 3/4 inches.
8. All gates and doors shall open away from the pool. If fire or other codes conflict with this requirement, additional doors which swing toward the pool and have latching mechanisms lower than 54" can be used if the doors are prominently designated for "Emergency Use Only" and alarmed so that the alarm cannot be easily de-activated.
9. A hinged gate or door leading to the pool area shall be self-closing and shall have a self-latching device.
10. The release mechanism of the self-latching device shall be located at least 54" inches above the floor.
11. Where a wall of a building serves as part of the barrier, there shall be no direct access to the pool through the wall. Except as follows:
 - A Windows leading to the pool area shall be equipped with a screwed in place wire mesh screen or a keyed-lock that prevents opening the window more than 4-inches.
 - B Sliding doors leading to the pool area are prohibited without acceptable self-closing and self-latching provisions.
 - C Indoor Swimming Pool: All ingresses/egresses and walls surrounding an indoor swimming pool shall comply with the intent of these provisions. Separate, alarmed fire exits may be required if ingress/egress door swing direction requirements of fire codes conflict with swing direction requirements of state and/or county codes.
12. Where the barrier is composed of a combination concrete masonry unit (CMU) and wrought iron, the total barrier shall have a minimum height of 4 ft. as measured from the outside grade. The wrought-iron portion shall be installed flush with the outside vertical surface of the CMU portion of the fence. The space between the wrought iron and CMU fencing shall be 1/2 inch or less. The vertical members of the wrought iron shall be spaced 1 3/4 inches on center (unless the wrought-iron portion of the fence is 5 ft. or greater in height and the distance between horizontal members above the CMU is 45 inches or more).
13. Filtration, disinfection, and water circulation equipment shall be enclosed by a separate 5' wall or fence meeting these standards.

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SWIMMING POOL CONSTRUCTION PROGRAM – OPERATIONAL INSPECTION FORM

THIS POOL AND/OR SPA HAS FAILED TO QUALIFY FOR A PERMIT TO OPERATE AND CANNOT BE USED

IF THE CONTRACTOR DOES NOT RESPOND TO THIS NOTICE, A RE-INSPECTION WILL BE CONDUCTED IN TEN DAYS. FAILURE TO MAKE CORRECTIONS MAY RESULT IN THE POOL BEING POSTED CLOSED.

PROJECT NAME: _____ MCESD #: _____
CONTRACTOR: _____ FAX #: () _____
OWNER: _____ FAX #: () _____

DEFICIENCIES TO BE CORRECTED

- ☐ **EQUIPMENT INSTALLED NOT THE SAME AS APPROVED ON APPLICATION/PLANS**
☐ PUMP UNIT INSTALLED: _____ UNIT APPROVED: _____
☐ FILTER UNIT INSTALLED: _____ UNIT APPROVED: _____
☐ CHLORINATOR UNIT INSTALLED: _____ UNIT APPROVED: _____
- ☐ **INSTALL PROPER GAUGES/VALVES/FLOW INDICATORS**
☐ VACUUM GAUGE ON PUMP SUCTION ☐ AIR RELIEF VALVE ON FILTER
☐ FLOW INDICATOR IN PUMP DISCHARGE LINE ☐ SIGHT GLASS ON BACKWASH LINE
☐ FLOW INDICATOR IN CHLORINATOR LINE
☐ PRESSURE GAUGE ON FILTER INFLUENT MANIFOLD AND FILTER EFFLUENT (PRECEEDING HEATER)
- ☐ **PROVIDE REQUIRED SAFETY EQUIPMENT, VISIBLE, MOUNTED, EASY TO ACCESS AND USE**
☐ RING BUOY WITH 50' ROPE ATTACHED ☐ SHEPHERD'S CROOK ON 16' RIGID POLE
☐ DEPTH MARKERS ON TILE LINE AND DECK ☐ TIGHTEN HANDRAILS/DIVING BOARDS ETC.
☐ INSTALL DARK CONTRASTING TILE ON EDGE OF BENCH & STEPS
☐ SIGNS: NO DIVING, POOL RULES, BATHER LOAD, NO DIVING DECK MARKERS
☐ EMERGENCY SHUT-OFF SWITCHES / 15 MINUTE MAXIMUM SPA TIMER
- ☐ **FENCING/BARRIER REQ'D AROUND ENTIRE POOL & NOT IN COMMON WITH ANY RESIDENCE**
- ☐ **INGRESS/EGRESS NOT CONSTRUCTED PER CODE & APPROVED PLANS**
☐ GATES MUST BE SELF CLOSING/SELF LATCHING ☐ LATCHES MUST BE 54" ABOVE FLOOR
☐ ENCLOSE EQUIPMENT WITHIN TAMPERPROOF FENCING/BARRIER
☐ DOORS/GATES MUST SWING/OPEN AWAY FROM POOL; NO WINDOWS TO RESIDENCES
- ☐ **ADJUST WATER CHEMISTRY**
☐ PROVIDE ON-SITE DPD TEST KIT ☐ PLACE CHEMICALS IN FEEDERS
☐ ADJUST pH TO 7-8 RANGE; ADJUST FREE CHLORINE TO 1-3 PPM POOL, 3-5 PPM SPA
- ☐ **PREVENT CROSS CONNECTION**
☐ INSTALL PRESSURE VACUUM BREAKER ON FILL LINE; BACKFLOW PREVENTERS ON ALL HOSE BIBS
☐ PROVIDE MINIMUM 2X PIPE DIAMETER AIR GAP ON BACKWASH LINE INTO SEWER
- ☐ **OTHER:** _____

INSPECTOR'S SIGNATURE NAME PHONE # DATE

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REQUEST FOR VARIANCE FOR CONSTRUCTION OF A PUBLIC OR SEMI-PUBLIC SWIMMING POOL OR SPA

Has the applicant submitted plans and a request for approval to construct a swimming pool to the Maricopa County Environmental Services Department for review? Yes No

This Pool/Spa is: New Existing

The undersigned requests a variance from the requirements of the Maricopa County Environmental Health Code Chapter VI applicable to the design, construction and operation of bathing places – public and semipublic swimming pools. It is understood that a variance can be granted only when Chapter VI of the Maricopa County Environmental Health Code is more restrictive than Administrative Rules and Regulations of the State of Arizona 9-8. For more information contact Mary Trujillo at 602.506.6675

Pool Name: _____

Location Address: _____

City: _____ Zip: _____

Phone #: () FAX #: ()

Owner Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone #: () FAX #: ()

Applicant Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone #: () FAX #: ()

Specify request **and how the intent of the code will remain satisfied**. Requirements of the code cannot just be dropped - mitigating measures, or equals or N/A status, etc. must be proposed. Indicate if attachments included:

REQUEST: _____

JUSTIFICATION : _____

TRUE OWNER'S SIGNATURE: _____ DATE: _____

TYPE OR PRINT NAME: _____ TITLE: _____

- Incomplete forms will not be accepted
- An attached letter of authorization to sign is required for any person signing this instrument other than the legal owner of the property
- **Submit 10 complete copies of the application and any related material**
- Attach plan of proposed facility clearly delineating area where variance is requested

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CONSTRUCTION CERTIFICATION LETTER

NOTE: ONLY ORIGINAL FORMS ACCEPTED - NO FAX OR COPIES ACCEPTED

Re: Serving: _____ (ie: Holiday Inn; Bellview Apts.; etc.)
Pool name: _____ (ie: Main, Clubhouse #2, etc.)
Address: _____ Phone: (____) _____
City: _____ Zip: _____
Contact Name: _____ Title: _____

Owner of Record to whom Operating Permit is to be issued (**MUST BE COMPLETED BY OWNER**):

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Contact Name: _____ Phone: (____) _____
Signature: _____ Date: _____
Title: _____

As required in chapter VI, Section 1, Regulation 2i, I certify that the above referenced bathing place has been constructed in accordance with the plans and specifications submitted to and approved by the Maricopa County Environmental Services Department, Division of Water and Waste Management, Swimming Pool Construction Program. **In addition, I certify that I am familiar with all State and County Code requirements applicable to this project and that this bathing place was constructed in compliance with those Code requirements.**

Engineer, Architect, or Contractor:

Printed Name: _____
Engineer or Architect Registration # or Contractor License # (A9, A19, KA5, or KA6): _____
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
Signature: _____ Date: _____
Phone: (____) _____

Note: Signature by a contractor requires notarization below. Signature by a P.E. or R.A. requires seal below.



SWIMMING POOL/SPA HYDRAULIC DESIGN GUIDELINES

TDH (skimmer pool with sand filter)

FEET FROM DRAIN:	1 – 25	26 – 50	51 – 75	76 – 100	101 – 125	126 – 150
TTL D/C HEAD (FT):	55	60	65	70	75	80

MAX FLOW RATES (PVC: C=140)

PIPE SIZE (IN):	1.25	1.5	2.0	2.5	3.0	4.0	6.0
PRESS SIDE (GPM):	25	60	90	120	220	350	800
SUCT SIDE (GPM):	15	35	50	80	120	220	450

MAX VELOCITIES

PRESSURE SIDE - 10ft/sec **SUCTION SIDE** – 6 ft/sec

TURNOVER RATES

SPA – 30 MIN **SWIMMING POOL** – 8 HRS **WADING POOL** – 1 HR

NUMBER OF SKIMMERS REQUIRED

SPA, WADING POOL: 1 skimmer per 200 ft²

SWIMMING POOL: 1 skimmer per 400 ft² (min. of 2 skimmers)

3 OR MORE SKIMMERS REQUIRES A CLOSED LOOP

MINIMUM PIPE SIZES (BASED ON SKIMMER FLOW CONTROLLING)

	<u>main drain</u>	<u>skimmer</u>	<u>return</u>	<u>flow (gpm)</u>
2 skimmer	1.5"	2"	1.5"	54
3 skimmer	2"	2.5"	2"	81
4 skimmer	2.5"	3"	2.5"	108
5 skimmer	2.5"	3"	3"	135
6 skimmer	3"	4"	3"	162

NUMBER OF RETURNS (INLETS) REQUIRED

(SWIMMING POOLS – 6 MINIMUM ON CLOSED LOOP; SPA, WADING POOL – 1 PER 15 LF OF PERIPHERY; 3 OR MORE REQUIRES CLOSED LOOP)

PERIMETER:	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315
# RETURNS:	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

ALL PIPING MUST PASS A PRESSURE TEST @ 25 PSI FOR 30 MIN